



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,947	01/11/2005	James M. Wilson	UPN-02811USA	2110
270 7590 07/27/2007 HOWSON AND HOWSON SUITE 210 501 OFFICE CENTER DRIVE FT WASHINGTON, PA 19034			EXAMINER LI, BAO Q	
			ART UNIT 1648	PAPER NUMBER
			MAIL DATE 07/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/510,947

Applicant(s)

WILSON ET AL.

Examiner

Bao Qun Li

Art Unit

1648

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 17 and 49-93 is/are pending in the application.
- 4a) Of the above claim(s) 49-54, 60-65 and 69-91 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 50-59, 66-68, 92 and 93 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 01/26/2007.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Amendment filed on October 28, 2004 has been acknowledged. Claims 1 and 17 have been amended. Claims 6-16 and 18-48 have been canceled. Claims 49-93 have been added.

Election/Restrictions

1. Applicant's election without traverse of group I, claims 1-5, 17, 55-59, 66-68, and 92-93 with species of NTDL4 chimeric polypeptide in the reply filed on June 12, 2007 is acknowledged. The examiner apologize that claim 66 should be restricted into the elected group I in the previous office action. Therefore, group 66 and other claims in the elected group I are considered in the current application on the record.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-5, 66-68, 92-93 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 1 is vague and indefinite in that claim 1 and specification fail to define what the cited "a functional deletion" is referred to. A clarification is required. This affects the dependent claims 2-5, 66-68, 92-93.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 1648

6. Claim 93 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 68 and 93 are new matter because the claims are not supported by the specification as it was originally filed. Applicants are suggested to point out the amendment to overcome the rejection.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-5, 55-59, 66-68 and 92 are rejected under 35 U.S.C. 102(a) as being anticipated by Kobinger et al. (A) (WO 01/83730A2) or rejected under 35 U.S.C. 102(e) as being anticipated by Kobinger et al. (B) (US 2004/0033604A1).

9. Kobinger et al. (A) or Kobinger et al. (B) teach a method for making a chimeric glycoprotein comprising the truncated Ebola glycoprotein fused to the membrane domain of the envelope glycoprotein of vesicular stomatitis virus (VSV), wherein the glycoprotein of the Ebola virus comprises the deletion in its C-terminal part from 649-676, whereas the signal peptide located at the N-terminal amino acid residues 1-31 and binding domain positioned at 180-350 are maintained. The truncated glycoprotein of Ebola glycoprotein is fused with envelope protein of VSV (See pages 17-19 for (A) and [0054-0059] for (B)). They also teach that such chimeric

Art Unit: 1648

Ebola/VSV hybridized envelope can be constructed as a pseudotyped VSV or Ebola pseudotyped vector (See pages 36-39 for (A) and Example 5). The pseudotyped recombinant Ebola virus/VSV vector can be carried by different pharmaceutical medium and delivered into human *n vivo* or *ex vivo* via different routes such as intramuscular and oral administrations (pages 25-27 in (A) and [0089-0090 in [B]). The immunogenic immunresponse will be induced inherently against the glycoprotein of Ebola as well as the envelope protein of VSV. (See claim 21-26). Therefore, the claims are anticipated by the cited references.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-5, 58, 59, 92, 93 are rejected under 35 U.S.C. 102(b) as being anticipated by Takada et al. (Virology 2000, Vol. 278, p. 20-26).

12. Takada et al. provide two kinds of chimeric Ebola envelope protein. One comprises the amino acid residues from 1-641 fused with the Influenza virus HA antigen (Fig. 1) which is formulated as an immunogenic composition that is able to induce an immune response after 24 hours post *in vivo* transfection (page 21 and Fig. 1). Another one is the chimeric Ebola virus with VSV envelope protein that also comprises GPs of Ebola virus (See page 25). To this context, the claims are anticipated by the cited reference.

Conclusion

Claim 17 is not free of rejection; However, it is not in condition for allowance because it depends on the rejection claim 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bao Qun Li whose telephone number is 571-272-0904. The examiner can normally be reached on 6:30 am to 3:30 pm.

Art Unit: 1648

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Baoqun Li

Bao Qun Li

July 24, 2007

**BACQUN LI, MD
PATENT EXAMINER**